DISCUSSION OF THE LEGAL STANDARDS FOR OSHA RULEMAKING

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LEGAL STANDARDS FOR OSHA RULEMAKING

STATUTORY OVERVIEW

The Occupational Health and Safety Act of 1970 ("the Act"), 29 U.S.C. §§ 651 et seq., authorizes the Secretary of Labor to set mandatory health and safety standards for the workplace. The Secretary promulgates regulations, inspects job sites, identifies employers who violate the regulations, and notifies such employers of proposed penalties. The Act also creates a separate body, the Occupational Safety and Health Review Commission, to adjudicate disputes that arise when employers contest the Secretary's citations or penalties. 29 U.S.C. § 659 (c).

Section 6 of the Act, 29 U.S.C. § 655, authorizes the Secretary of Labor to promulgate occupational safety and health standards, as defined in Section 3(8) of the Act, 29 U.S.C. § 652 (8), which are "reasonably necessary or appropriate to provide safe or healthful employment and places of employment." In addition, pursuant to the same section, the Secretary is required, in promulgating standards regulating toxic materials or harmful physical agents, to set the standard which most adequately assures, "to the extent feasible," that no employee will suffer material impairment of health or functional capacity.

In setting workplace health and safety standards, OSHA must give public notice of the proposed rulemaking, solicit participation of interested persons, and hold a public hearing if

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requested. OSHA must also incorporate in the final rule a concise statement of its basis and purpose. 29 U.S.C. § 655(b)(2)-(4). Rules promulgated by OSHA are reviewed under "the substantial evidence" standard, 29 U.S.C. § 655(f).

With respect to OSHA, the courts have interpreted this standard as requiring OSHA to "identify relevant factual evidence, to explain the logic and policies underlying any legislative choice, to state candidly any assumptions on which it relies, and to present its reasons for rejecting significant contrary evidence and argument." United Steelworkers of America v. Marshall, 647 F.2d 1189 (D.C. Cir. 1980), cert. denied, 453 U.S. 913 (1981); see also AFL-CIO v. OSHA, 1992 U.S. App. LEXIS 15237 (11th Cir. 1992) ("the agency must pinpoint the factual evidence and the policy considerations upon which it relied. This requires explication of the assumptions underlying predictions or extrapolations, and of the basis for its resolution of conflicts and ambiguities. In enforcing these requirements, the court does not reach out to resolve controversies over technical data. Instead it seeks to ensure public accountability.").

The Act, in Section 6(c), 29 U.S.C. § 655(c), allows OSHA to essentially by-pass formal rulemaking procedures in certain emergency situations. Pursuant to that provision, the Secretary, without going through public rulemaking procedures, is required to

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issue an Emergency Temporary Standard, when there is a finding that:

(A) employees are exposed to grave danger from exposure to substances or agents determined to be toxic or physically harmful or from new hazards; and

(B) such emergency temporary standard is necessary to protect employees from such damage.

An Emergency Temporary Standard, which is effective immediately upon publication in the Federal Register, remains in effect for a six-month period during which time the Secretary must complete work on a final standard. The Emergency Temporary Standard is then superseded by a standard promulgated under the Act's regular rulemaking procedure, set forth in Section 6(b), 29 U.S.C. § 655(b). The Secretary must complete these proceedings and issue a permanent standard within six months of the issuance of the Emergency Temporary Standard.

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LEGAL STANDARDS FOR RULEMAKING

Before OSHA can promulgate a permanent occupational safety and health standard, it is required by § 3(8) of the Act to provide an estimate of the actual risk associated with a particular substance and explain in an understandable way why that risk is significant. AFL-CIO v. OSHA, supra. The U.S. Supreme Court first developed the concept of "significant risk" in Industrial Union Department, AFL-CIO v. American Petroleum Institute, 448 U.S. 607 (1980) (plurality) ("Benzene").

When the U.S. Supreme Court interpreted § 6(b)(5) of the Act in light of § 3(8), it stated: "[T]he burden [is] on the agency to show, on the basis of substantial evidence, that it is at least more likely than not, that long-term exposure ... presents a significant risk of material health impairment." Benzene, 448 U.S. at 653. Therefore, the agency must show that a significant risk is present prior to issuing any regulatory standard.[1] What will constitute "significant risk" is an inquiry that cannot, according to the Supreme Court, be a "mathematical straightjacket." 448 U.S. at 655. The Court further observed that OSHA would not

1. The risk requirement in § 652(8) applies to all OSHA standards. The feasibility requirement in § 655(b)(5), discussed infra, applies only to standards dealing with toxic materials or harmful physical agents.

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be required "to wait for deaths to occur before taking any action." Id.

If a material health impairment is found to exist at current exposure levels to toxic materials or harmful physical agents,[2] OSHA is then required to:

> set the standard which most adequately assures, to the extent feasible, on the basis of the best available evidence, that no employee will suffer material impairment of health or functional capacity even if such employee has regular exposure to the hazard dealt with by such standard for the period of his working life. Development of standards under this subsection shall be based upon research, demonstrations, experiments, and such other information as may be appropriate.

29 U.S.C. § 655(b)(5).

1. Significant Risk

Consistent with the Benzene decision, the federal courts have shown great deference to OSHA's interpretation of scientific evidence in the agency's finding of significant risk. Consequently, the task of defining significant risk has largely been left to the agency.

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2. Indoor air constituents and the elements of ETS include some substances that have been classified by OSHA as toxic materials or harmful physical agents. But whether indoor air or ETS can be so classified remains an open question.

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OSHA has found the following risks to be significant in promulgating occupational exposure levels for various harmful substances: 12 to 23 chances in 10,000 that workers exposed to ethylene oxide will suffer material health impairments, 49 Fed. Reg. at 25,762, see also, 48 Fed. Reg. 17,283; eight chances in a 1,000 of contracting cancer from exposure to pentavalent arsenic, 48 Fed. Reg. 1863; 8.64 estimated lung cancer cases per 1,000 workers exposed to formaldehyde, 52 Fed. Reg. 46,221.

The federal courts deferred in each of these cases to the agency's finding of significant risk. See Asarco, Inc. v. OSHA, 746 F.2d 483 (9th Cir. 1984) ("Arsenic"); Public Citizen Health Research Group v. Tyson, 796 F.2d 1479 (D.C. Cir. 1986) ("Ethylene Oxide"); Building and Construction Trade Department AFL-CIO v. Brock, 838 F.2d 1258 (D.C. Cir. 1988). While these three decisions addressed the significant risk issue, none of the courts definitively established a threshold for significant risk. In International Union, UAW v. Pendergrass, 878 F.2d 389 (D.C. Cir. 1989), the court attempted to articulate such a threshold. The court noted, "OSHA appears to have incorporated [the 1 in 1,000 standard] as a policy norm, at least in the sense of believing that it must regulate if it finds a risk at the 1 in 1,000 level." Id. at 392.

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The Benzene decision and the subsequent courts of appeals decisions acknowledge that, at the very least, a one in 1,000 chance of suffering a material health impairment is a significant risk. The agency appears to adhere to this standard and has found any risk of harm in excess of one in 1,000 to be significant. Even when OSHA sets new exposure levels which result in risks exceeding one in 1,000, it maintains that these levels still pose a significant risk. OSHA justifies such levels on the grounds that lower standards are not economically or technologically feasible.

The deference shown by the federal courts is even more prevalent when a regulation pertains to a suspected carcinogen. "The agency is free to use conservative assumptions in interpreting the data with respect to carcinogens, risking error on the side of over-protection." Benzene, 448 U.S. at 656. In addition, the Supreme Court instructed that reviewing courts should: (1) allow the Secretary to regulate on the basis of the best available evidence; (2) allow OSHA leeway where findings pertain to the frontiers of scientific knowledge; and (3) not require OSHA to support a finding of significant risk with anything approaching scientific certainty. Id. The Benzene review standards have allowed OSHA to regulate upon a finding of significant risk based on the extrapolation of data from studies performed on similar materials and from animal studies.

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In addition, the fact that a study upon which OSHA has based its finding of significant risk is challenged as to its reliability is not sufficient to overcome the agency's determination. In Ethylene Oxide, the court stated: "The mere fact that [a] study is challenged by some or even a mathematical majority, of commentators, does not render it scientifically or legally useless." 796 F.2d at 1494. Consequently, as long as OSHA bases its finding of significant risk on arguably reputable scientific evidence, an opponent will have a difficult time challenging the finding. Following the Supreme Court's lead in Benzene, federal courts have found significant risks to be supported with substantial evidence in light of contradictory evidence which may be equally reliable. Since it is the Secretary's duty to define significant risk, and the agency is provided with leeway in examining scientific data, the substantial evidence standard OSHA must meet does not pose an overwhelming obstacle.

An exception to this practice of deference can be found in AFL-CIO v. OSHA, supra, where the court vacated OSHA's Air Contaminants Standard in large part on the basis of the agency's failure to support its findings of significant risk. This case involved permissible exposure limits ("PELs") for over 400 toxic substances which OSHA revised in a single rulemaking. Although some of the parties to the action challenged OSHA's authority to set standards for multiple substances in a single rulemaking, the

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court held that there was nothing in the Act to prevent OSHA from proceeding in this manner.

While the Eleventh Circuit Court in AFL-CIO v. OSHA acknowledged the traditional deference language of Benzene, the court interpreted it in light of the statutory requirements of Section 6 of the Act. Consequently, the court applied what it characterized as a true "substantial evidence" standard of review and the burden remained with OSHA to show the existence of a significant risk of material health impairment. In promulgating the Air Contaminants Standard, OSHA stated that the agency's experience in issuing Section 6(b)(5) standards should allow for a less detailed analysis. 53 Fed. Reg. at 20,964. The court rejected this notion and responded that the agency's assertion "display[ed] more than a touch of hubris,... [and that it] reveals a fundamental misperception of the OSH Act and the caselaw interpreting that act." AFL-CIO v. OSHA at 19.

2. Material Impairment of Health

The court in AFL-CIO v. OSHA also addressed the question of what constitutes a material impairment of health. Traditionally, OSHA risk assessments indicate the excess mortality rate from exposure to a specific substance at various PELs. The mortality rate assessment is particularly effective when the underlying

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substance is a carcinogen, because it is irrefutable that the risk of death is significant.

In the promulgation of more recent standards, OSHA has assessed the risks posed by non-carcinogenic substances and found risks other than death to be significant. The Eleventh Circuit Court in AFL-CIO v. OSHA, upheld OSHA's finding of non-lethal health effects as material impairments. Specifically, the court found that sensory irritation may attain a level at which it threatens employee health and job performance. According to the court, sensory irritation includes stinging, itching, burning of the eyes, tearing, a burning sensation in the nasal passages, coughing, sputum production, chest pain and wheezing. "Section 6(b)(5) of the Act charges OSHA with addressing all forms of 'material impairment of health or functional capacity,'" the court states, "and not exclusively 'death or serious physical harm' or 'grave danger' from exposure to toxic substances." 1992 U.S. App. LEXIS 15237 at *26.

OSHA is thus not limited to issuing standards for substances which only pose risks of death. The Eleventh Circuit Court, however, is the first court to specifically hold that sensory irritation is a material health impairment.[3] The resulting impact

3. The court cautioned that "purely subjective responses would not constitute material impairment" and that OSHA would have to (continued...)

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of this aspect of AFL-CIO v. OSHA is that OSHA need not rely solely on the carcinogenic effects of a substance in order to promulgate standards. For instance, if OSHA finds that the carcinogenic risks posed by a particular substance do not exceed one in 1,000, the agency may still find a significant risk posed by other non-lethal health effects.

3. Feasibility

Section 655(b)(5) also requires that a permanent OSHA standard regulating exposure to toxic materials or harmful physical agents protect workers "to the extent feasible." Feasible means "capable of being done." American Textile Mfrs. Inst. v. Donovan, 452 U.S. 490, 508-09 (1981) ("Cotton Dust"). An OSHA standard must be both technologically and economically feasible.

As is the case with proof of a substantial risk of harm, OSHA need not prove either technological or economic feasibility with certainty, but is required (i) to use the best available evidence and the latest available scientific data and (ii) to support its conclusions with substantial evidence. 29 U.S.C.

3.(...continued)
"weigh irritation with physical manifestations more heavily than irritation with purely subjective responses." 1992 U.S. App. LEXIS 15237 at *25-26.

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§ 655(b)(5). American Iron & Steel Inst. v. OSHA, 939 F.2d 975, 982 (D.C. Cir. 1991) ("Lead II").

To establish technological feasibility, OSHA must present substantial evidence of a reasonable possibility that a typical firm affected by a standard can develop and install engineering and work practice controls that can meet the standard in most of the firm's operations most of the time. Arsenic, supra, 746 F.2d at 498. A "reasonable possibility" is established when OSHA is able to "point[ ] to technology that is either [i] already in use or [ii] has been conceived and is reasonably capable of experimental refinement and distribution within the standard's deadlines." United Steelworkers of America v. Marshall, 647 F.2d 1189, 1272 (D.C. Cir. 1980), cert. denied, 453 U.S. 913 (1981) ("Steelworkers--Lead I").

OSHA is not restricted to the state of the art in the regulated industry. The Act is "technology--forcing," which means OSHA can require industry to meet standards never attained anywhere, provided it presents substantial evidence that "companies acting vigorously and in good faith can develop the technology." Arsenic, 746 F.2d at 495 (emphasis in original).

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A standard is economically feasible if the costs it imposes can be passed on or absorbed without imperiling the existence or threatening the competitive structure of the industries affected by the standard. Steelworkers--Lead I, 647 F.2d at 1265, 1272. A standard may be economically feasible "even if it does portend disaster for some marginal firms." Id.

To demonstrate economic feasibility, OSHA must submit substantial evidence that it reasonably estimated the range of probable costs of industry compliance and compared those costs to the industry's financial profit "to determine the likely effect of the costs on the prices of the industry's product (if the costs were able to be passed through to consumers) or on the viability of the industry (if the costs had to be absorbed)." Lead II 939 F.2d at 982. OSHA is not required "to write an economic treatise." Arsenic, 746 F.2d at 501.

In performing this analysis, OSHA may consider qualitative information, such as whether modernization required by the standard may lead to future profitability of the industry. Lead II, 939 F.2d at 982. Moreover, OSHA can support a finding of economic feasibility by comparing the costs of its standard to the financial fitness of an industry as a whole, even if the segment of the industry directly affected by the standard already is operating at a loss and would not be capable of implementing the standard if it

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were a stand-alone sector of the industry. Id. at 986 (holding that OSHA properly applied the costs of additional controls necessary to achieve the airborne lead standard to the steel industry as a whole, which showed signs of profitability, rather than against the leaded steelmaking segment of the industry, which was unprofitable and could not have implemented the controls on its own).

The Act does not require OSHA to compare the costs and benefits of a standard regulating exposure to toxic materials and harmful physical agents. Cotton Dust, 452 U.S. at 509. The reason is that the Act requires OSHA to promulgate the standard which protects workers to the extent feasible. In § 655(b)(5), "Congress itself defined the basic relationship between costs and benefits, by placing the benefit of worker health above all other considerations save those making attainment of this benefit unachievable." Id. The legislative history of § 655(b)(5) confirms this conclusion and shows that Congress (i) knew the Act would create substantial costs for employers and (ii) viewed such costs as "a cost of doing business." Id. at 519-20.

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RULEMAKING OPTIONS

There are a number of substantive options available to OSHA for regulating indoor air and ETS in a single rulemaking and for regulating ETS separately. These include:

1. The Air Contaminants Standard;

2. An Indoor Air Quality Standard;

3. The Hazardous Communication Standard;

4. A possible ventilation standard; and

5. The General Duty Clause in the OSH Act.

1. Air Contaminants Standard

OSHA could propose to add indoor air constituents (including ETS) to the pre-existing air contaminants standard, 29 C.P.F.R. § 1910.1000. Pursuant to this standard, employers are expected to meet exposure limits for specified contaminants including Time Weighted Average ("TWA") limits, Short Term Exposure Limits ("STEL") and, possibly, Ceiling Limits. TWA is defined as the employees' average airborne exposure in any eight-hour work

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shift of a 40-hour week, 29 C.F.R. § 1910.1000(a)(5). STEL is the employees' 15 minutes time weighted average exposure which cannot be exceeded at any time. Id. Ceiling Limit is the exposure limit which cannot be exceeded during any part of the work day. Id.

If indoor air constituents were to be regulated under the Air Contaminants Standard, specific exposure limits would be set for each element. Given that indoor air contains thousands of constituents and that each standard must be separately justified, it seems unlikely that indoor air will be regulated in this way by OSHA. Similarly, ETS contains many different substances, and it is unlikely that OSHA would regulate ETS by setting an individual standard for each substance in ETS.

A number of substances already listed in the Air Contaminants Standard can be found in ETS and in indoor air generally. Some of these substances include: carbon monoxide, nicotine, nickel, formaldehyde, benzene, nitrosodimethylamine, hydrazine, 2-toluidine and benzo[a] pyrene. Studies have shown that a room would have to be filled with levels of contaminants greatly exceeding what is experienced under normal conditions in order to achieve regulated concentrations. For example, in order to exceed the nickel TWA, a small office without any ventilation would have to be filled with the smoke from 4,166 cigarettes. See Aviado, Suspected Pulmonary Carcinogens in Environmental Tobacco

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Smoke, in Indoor Air and Ambient Air Quality (Perry and Kirk ed. 1988). For hydrazine, the smoke from 111,111 cigarettes would be required. Id.

If OSHA would choose to lower the exposure limits for those substances which are ETS constituents, other chemicals and products which contribute much greater amounts of these substances would be affected. A number of them are, in fact, important parts of certain chemicals, manufacturing processes or products. Any reduction in exposure limits could seriously impact certain industries. This would make it difficult for OSHA to lower exposure limits for these chemicals in order to target ETS. If OSHA would try to distinguish between standards for industrial facilities and other workplaces, such as office buildings, OSHA would be subject to criticism for creating an ultra-protective standard for white collar workers while allowing a more lax standard for blue collar workers.

a. Indoor Air/ETS in combination

Some individual constituents found in both indoor air and ETS are already regulated by OSHA. OSHA can only lower those standards if it makes "a threshold finding that a significant risk of material health impairment exists at the current levels of exposure." AFL-CIO v. OSHA, supra, at *17. Assuming that the

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current standards were set at a level protective of employee health and at which significant risk of material health impairment does not exist, it will be difficult for OSHA to produce the substantial evidence required under the Act to support a rulemaking lowering the standards.[4] In addition, as noted above, OSHA should be unable to justify setting a lower standard only for nonindustrial workplaces.[5]

b. Separate ETS rulemaking

Should OSHA attempt to set exposure limits for ETS without regard to other indoor air constituents, it will encounter the same difficulties discussed above, i.e., some of the substances contained in ETS are already subject to an air contaminants standard, and it is unlikely that OSHA can produce substantial evidence to justify the promulgation of a lower standard.

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4. In the event that OSHA set a particular standard at a level posing significant risk to employee health for economic or technological feasibility reasons, it will be easier to prove that a lower standard is necessary.

5. If OSHA can locate credible scientific evidence showing that there is a significant risk of material health impairment due to employee exposure to a combination of indoor air constituents at levels typically encountered in nonindustrial workplaces, it is possible that OSHA would be able to meet the legal standard for establishing different air contaminants standards in industrial and nonindustrial workplaces. Due to the relative infancy of research on "sick building syndrome," such evidence may not be readily available.

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In those circumstances where the OSHA standard was set at a dangerously high level due to economic or technological feasibility considerations, OSHA may be able to prove that current levels of exposure do pose a significant risk of material health impairment. Because ETS is not present in a workplace as a necessary byproduct of a manufacturing process or as a component of the building structure, it would appear that a workplace smoking ban could clear the feasibility hurdles of the Act.

2. Indoor Air Quality Standard

As an alternative to adding indoor air constituents to the pre-existing Air Contaminants Standard, OSHA could promulgate a new Indoor Air Quality Standard. Such a standard could be similar to standards promulgated by OSHA for asbestos, 29 C.F.R. § 1910.1001(c), and formaldehyde, 29 C.F.R. § 1910.1048. The IAQ standard, like an air contaminants standard, would establish separate exposure limits for each substance, but it could also set other more pervasive requirements. For example, the asbestos standard requires monitoring and notification to the employee of monitoring results. The standard addresses acceptable methods of monitoring, and it requires designation of areas where respirators must be available and prohibits eating, drinking and smoking in those areas. In addition, various other activities, such as certain procedures dealing with contaminated clothing, training programs,

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medical surveillance, etc., are mandated. Similar standards are applicable for formaldehyde.

An IAQ standard would offer OSHA considerably more flexibility than the Air Contaminants Standard. For example, OSHA might impose ventilation requirements under the IAQ standard. It could also require medical monitoring plus notification to impacted employees.

With asbestos and formaldehyde, compliance problems usually arise because substances are present as part of the construction materials of the facility or are a part of an item being used or produced. Remediation would require removal of the substance or discontinuation of the product. In most cases, this is not cost effective so the employer willingly takes those measures necessary to attain compliance. This will not be the case for ETS or some other indoor air constituents. For example, employers will often have very little stake in allowing smoking in the workplace. Many of them would be reluctant to spend funds for equipment when a smoking ban or a ban on certain cleaning supplies or pesticides would be simpler and less costly.

Whether OSHA could prove a substantial risk of material health impairment in order to support an indoor air/ETS or separate ETS standard under this rulemaking option would require an analysis

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similar to that undertaken above with regard to the air contaminants standard option.

3. Hazard Communication Standard

Although unlikely as the primary source of indoor air regulation, OSHA's hazard communication standard could impact ETS and other indoor air constituents. The Hazard Communication Standard, 29 C.F.R. § 1910.1200, is a multi-faceted regulatory scheme designed to evaluate chemical hazards and to disseminate health risk warnings to affected employees. Currently, the standard contains a tobacco or tobacco products exemption, but the exemption could be removed by modifying the standard in a rulemaking proceeding.

The standard applies to "Hazardous Chemicals" which are defined as "any chemical which is a physical or health hazard." Id. at § 1910.1200(c). The term "health hazard" means "a chemical for which there is statistically significant evidence based on at least one study conducted in accordance with established scientific principals that acute or chronic health effects may occur in exposed employees." Id. Moreover, "the term health hazard includes chemicals which are carcinogens, toxic or highly toxic agents, reproductive toxins, irritants, corrosives, sensitizers, hepatotoxins, nephrotoxins, neurotoxins, agents which act on the

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hematopoietic system, and agents which damage the lungs, skin, eyes, or mucous membranes." Id. Indoor air constituents common to office environments have been linked to acute irritations of lungs, skin, eyes and mucous membranes.

The standard requires a chemical manufacturer (chemical is defined as "any element, chemical compound or mixture of elements and/or compounds," id.) to determine if the chemicals produced are hazardous. Statistically significant evidence based on at least one study is sufficient if "health hazards" are found. Id. at § 1910.1200(d)(2). Employers are required to develop a written hazard communication program for their workplace. Id. at § 1910.1200(e). Manufacturers or distributors must label outgoing hazardous chemicals by identifying the hazardous chemicals and providing appropriate warnings. Id. at § 1910.1200(f). Manufacturers must also obtain or develop a material safety data sheet for each hazardous chemical produced. Downstream employers must ensure that containers of hazardous chemicals are labeled and must provide information and training to employees.

The standard was obviously intended to regulate manufacturers of hazardous chemicals and employers in facilities where such chemicals are used in manufacturing. It is arguable that the standard, on its face, would not apply to smoking or to the off-gassing of furnishings, wallcoverings, carpeting, and other

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sources of indoor air constituents in the workplace. However, because of the definitional provisions in the standard, its possible application to ETS and other indoor air constituents should be considered.

a. Indoor Air/ETS in combination

Employees who are protected by the OSHA hazard communication standard are those "who may be exposed to hazardous chemicals under normal operating conditions or in foreseeable emergencies. Workers such as office workers or bank tellers who encounter hazardous chemicals only in non-routine, isolated instances are not covered." 29 C.F.R. § 1910.1200(c). Whether OSHA could require employers and those who make the substances that may off-gas from common office fixtures and furnishings to comply with this standard would depend upon whether conditions giving rise to IAQ-related health effects are considered to be "non-routine."

OSHA could attempt to delete the office workers exemption from its hazard communication standard. It may be difficult, however, for OSHA to prove by substantial evidence that there is a significant risk of material health impairment to office workers where chemical manufacturers and employers do not inform them of the risks posed by exposure to indoor air constituents. Any hazards

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associated with poor indoor air quality can be more readily remediated with adequate ventilation; something over which the individual worker has little control.

b. Separate ETS rulemaking

Currently, as noted above, "tobacco or tobacco products" are specifically exempted from OSHA's hazard communication standard. Because tobacco and tobacco products are already required by Congress to carry warnings about health effects related to their use, it is questionable whether OSHA would attempt to impose additional warning requirements upon the tobacco industry. An OSHA spokesperson, however, recently suggested that ETS regulation could take the form of employer warnings to employees about the purported hazards of ETS exposure. See BNA Daily Labor Report, June 24, 1993.

OSHA may be unable to support a finding that lack of employer warnings about ETS exposure in the workplace poses a significant risk of material health impairment to employees. The available data from published epidemiologic studies do not provide convincing support for the claim that ETS exposure in public places and workplaces is associated with chronic disease in nonsmokers. Twelve of the 14 workplace studies report associations between ETS and nonsmoker lung cancer which do not achieve statistical

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significance. Only two studies report marginally statistically significant increased risks for persons who reported exposure to ETS in the workplace. It would remain to be seen whether a court would find that these studies constitute the requisite substantial evidence under the Act.

4. Ventilation Standard

Another type of standard OSHA could use for regulating indoor air quality is a ventilation standard. OSHA has an activity specific ventilation standard, 29 C.F.R. § 1910.106, which deals with flammable and combustible liquids categories. There are other standards including a standard for abrasive blasting, grinding operations, spray finishing operations and open tank operations. 29 C.F.R. § 1910.94.

Although not a branch of OSHA, the American Society of Health, Refrigerating and Air Conditioning Engineers, Inc. (ASHRAE) promulgates ventilation standards for indoor air. ASHRAE's standards appear to be the standards adopted by municipalities as code requirements. The standards are an attempt to achieve the necessary balance between energy consumption and indoor air quality.

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In Table 2 of its standard, ASHRAE lists the outdoor air requirements for ventilation for various categories including, but not limited to, dry cleaners, restaurants, hotels and office space. For office space, ASHRAE recommends a ventilation rate of 20 cfm/person. This rate is four times higher than ASHRAE's previously recommended rate. The 1981 outside air requirement was only five cfm/person; however, the 1981 requirements were divided into two categories -- smoking and nonsmoking. Five cfm/person was the nonsmoking requirement. The smoking requirement was 20 cfm/person-- the same requirement recommended now with no nonsmoking or smoking distinction.

An increase in the outside air ventilation rate would offer a relatively simple alternative to deal with the entire indoor air quality problem at one time. It would obviate the need for substance by substance testing in offices, and would address the most significant problem with indoor air, i.e., inadequate ventilation.

a. Indoor Air/ETS in combination

There are a number of studies relating IAQ problems to inadequate ventilation. There are also studies about purported health effects of exposure to indoor air constituents. Although the levels of indoor air constituents typically encountered in a

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nonindustrial workplace may not pose a risk of serious illness or death to employees, where such substances cause sensory irritations that threaten employee health and job performance, such irritation can be found to constitute a "material impairment of health or functional capacity" under the Act.[6] AFL-CIO v. OSHA, supra. In spite of controversy over these issues in the scientific community, OSHA may be able to support the establishment of a ventilation standard with substantial evidence.

It is possible, as well, that OSHA would combine a ventilation standard with standards regarding HVAC design, installation, performance and maintenance, and with standards regarding off-gassing following new construction or renovation. Again, although subject to some controversy, there may be sufficient evidence to justify the establishment of such standards. The only obstacle that OSHA might face in seeking to establish ventilation standards would be economic feasibility, but this is a factor that must be considered only where the standard regulates toxic materials or harmful physical agents. It is not entirely clear whether indoor air constituents are toxic materials or harmful physical agents.

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6. Where the indoor air constituents can be shown to cause cancer or such illnesses as Legionnaires disease at rates generally found by OSHA to be significant, material health impairment will not be an issue.

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Source: https://www.industrydocuments.ucsf.edu/docs/ftcc0003

b. Separate ETS rulemaking

In spite of the dispute over studies purporting to show that ETS exposure causes cancer and respiratory problems in nonsmokers, courts may defer to an OSHA determination of significant risk regarding ETS in the workplace. It is questionable, however, whether OSHA would attempt to regulate ETS by means of a ventilation standard. Due to purported cost considerations, OSHA could find that a smoking ban is the most cost effective method of removing ETS from the workplace. Disputes in the relevant literature over the issue could be ignored by a reviewing court as long as there were some economic studies upon which OSHA could rely in adopting a smoking ban as opposed to a ventilation standard.

Only when ETS is considered as just one component in a total IAQ picture does it become clear that improvements to ventilation provide the optimal means of mitigating IAQ/ETS problems. Unlike potentially toxic emissions from office equipment, carpets, wallcoverings, furnishings and other essential products such as cleaning supplies, ETS can readily be removed from the indoor environment by means of a smoking ban if it is considered separately from other purported IAQ problems.

5. General Duty Clause

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Source: https://www.industrydocuments.ucsf.edu/docs/ftcc0003

Another possible regulatory approach available to OSHA is the general duty clause. Section 654(a)(1), 29 U.S.C. provides that an employer is to "furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or likely to cause death or serious physical harm to his employees." To establish a violation of the general duty clause, it must be shown that:

-- the employer failed the render the workplace free of a hazard;

-- the hazard was recognized; and

-- the hazard caused or was likely to cause death or serious physical harm.

Kelly Springfield Tire Co., Inc. v. Donovan, 729 F.2d 317 (5th Cir. 1984).

A recent OSHA compliance memo indicates that the agency does not intend to aggressively use the general duty clause for indoor air problems. The memo indicates that investigations of indoor air complaints rarely lead to identification of harmful levels of toxics. In an effort to conserve resources, OSHA has determined that there will not be "programmed" or "programmed-

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regulated" inspections based on indoor air quality hazards. In the memo, the agency notes that no exposure limit has been set for ETS and states that chemical analysis would be required to support any violations for specific substances. In light of this memo, general duty clause enforcement does not appear to be a top OSHA priority.

In addition, OSHA may not cite employers under the general duty clause if a specific occupational safety and health standard is applicable. 29 C.F.R. 1910.5(f); OSHA Field Operations Manual, CCH Employment Safety and Health Guide ¶7966.190 (4-18-91); Usery v. Marquette Cement Mfg. Co., 568 F.2d 902 n.5 (2d Cir. 1977). Because OSHA already has specific occupational safety and health standards in effect which apply to the chemicals contained in ETS and in other indoor air constituents, these standards and their permissible exposure limits ("PELs") should govern workplace exposure levels.

a. Indoor air/ETS in combination

The general duty clause requires employers to provide a place of employment "free from recognized hazards that are causing or are likely to cause death or serious physical harm" to employees. 29 U.S.C. § 654(a)(1). Poor indoor air quality in general has been linked to a number of health problems, but the specific indoor

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air constituents responsible for those problems can be difficult to identify, particularly when precise levels of purportedly offending constituents cannot be measured or even detected. OSHA may, therefore, have a difficult time proving that particular indoor air constituents can be regulated under the general duty clause as "recognized hazards."

It should be noted, however, that OSHA has announced its intention to regulate occupational exposure to tuberculosis (TB) under the general duty clause. See Occupational Safety & Health Reporter, September 8, 1993. OSHA has circulated an eight-page draft memo to interested parties that sets forth the agency's planned enforcement policy and procedures for inspecting workplaces for occupational exposure to TB. A number of labor unions petitioned OSHA in August 1993, to develop such a policy. The policy, which is apparently being issued partly in response to the petition, will become effective immediately after the final policy is received by regional administrators.[7]

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7. In addition to regulating occupational exposure to TB under the general duty clause, OSHA will also apparently rely upon its personal protective equipment regulation to cite employers who fail to provide adequate respirator protection to employees in particular circumstances.

Inspections for TB exposure will be conducted in response to worker complaints or as part of an industrial hygiene inspection in places such as health care facilities, correctional institutions, homeless shelters, long-term care facilities and drug treatment centers. Among the measures OSHA recommends for hazard abatement are (i) medical screening; (ii) imposing work restrictions on infectious workers; (iii) use of respiratory

(continued...)

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b. Separate ETS rulemaking

Given OSHA's recent activity with respect to the regulation of workplace exposure to TB, it is possible that OSHA would attempt to regulate ETS under the general duty clause as well. OSHA's success in doing so could depend upon whether a court would choose to regard ETS as a previously unregulated substance. Since a number of chemicals contained in ETS are already regulated, OSHA's own policy guidelines require those chemicals to be regulated pursuant to the specific standards that have been set for them. In addition, it may be difficult for OSHA to provide substantial evidence showing that workplace exposure to ETS has caused or is likely to cause death or serious physical harm.

7.(...continued)
isolation rooms for individuals with suspected or confirmed TB; and (iv) engineering controls such as local exhaust and ultraviolet lights.

The circumstances under which employees must wear respirators are outlined in the memo as are the types of respirators that must be provided. OSHA will also require employers to record the incidence of active and latent TB among workers in high-risk settings in a workplace injury and illness log.

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Source: https://www.industrydocuments.ucsf.edu/docs/ftcc0003